1 (a) A geometric progression starts 4 16

Work out the next term.

[1 mark]

$a = 4$, $r = 4$

$T_3 = 4 \times 4^2$

$= 64$

Answer 64 (1)

2 A is an **arithmetic** progression.

Here are the first four terms.

13 16 19 22

G is a **geometric** progression.

Here are the first four terms.

2 4 8 16

nth term of A = 8th term of G

Work out the value of n.

[4 marks]

A : $a = 13$, $d = 3$ (1)

G : $a = 2$, $r = 2$

G : $T_8 = 2 \times 2^7 = 256$ (1)

$256 = 13 + (n-1)3$ (1)

$243 = (n-1)3$

$n - 1 = 81$

$n = 82$ (1)

$n =$ 82